REMARKS

The Office Action of December 11, 2002, has been carefully considered.

It is noted that claims 1, 3 and 4 are rejected under 35 USC 103(a) over the patent to Sivaramakrsihnan, et al. in view of the patent to Adams, et al. and the patent to Nishizawa, et al. and the patent to Tsuchimoto.

Claim 2 is rejected under 35 USC 103(a) over Sivaramakrsihnan, et al. in view of Adams, et al., and further in view of the patent to Amano, et al.

In view of the Examiner's rejections of the claims applicant has amended independent claim 1. It should be mentioned that the claims now on file specifically define an apparatus for forming an ultra-thin film of a semiconductor device, which apparatus includes at least two gas supply pipes that supply at least two material gases onto a substrate. The supply of the gases is controlled by two gas supply controllers. One of the gas supply pipes surrounds another of the gas supply pipes and the pipes extend through a common inlet in the ceiling of the reactive chamber so as to extend to a position above the suscepter.

It is respectfully submitted that the claims now on file differ essentially and in an unobvious, highly advantageous manner from the constructions disclosed in the references.

Turning now to the references, Sivaramakrsihnan, et al. and Adams, et al. were discussed in the last filed amendment and that discussion is incorporated herein by reference.

To summarize, neither Sivaramakrsihnan, et al. nor Adams, et al. taken either alone or in combination teach or suggest a reactive chamber having an upper container and a lower container junctioned by an O ring, nor do they teach or suggest at least two gas supply pipes and at least two gas supply controllers. Furthermore, neither reference teaches the features added to claim 1 in the present amendmnt.

The patent to Nishizawa, et al. discloses a semiconductor crystal growth apparatus. The Examiner cited this reference in combination with Sivaramakrsihnan, et al. and Adams, et al. as teaching two gas supply pipes and two supply controllers. Although Nishizawa, et al. teach two gas supply pipes and two controllers, these are arranged separately from one another in the chamber (see Figures 5, 8 and 10). With such a construction it will be difficult to supply a first

gas and a second gas onto a substrate. Thus, an ultra thin film by atomic layer deposition cannot be formed uniformly and stabily. Also, Nishizawa, et al. do not teach gas supply pipes that surround one another and which penetrate the ceiling of the reactive chamber through a common inlet so as to extend to a position above the suscepter, as in the presently claimed invention.

The patent to Tsuchimoto, et al. discloses a method of transporting substances in a plasma stream to a target. The Examiner cited this reference as teaching two remote plasma generators.

The Examiner combined the teachings of these references in determining that claims 1, 3 and 4 would be unpatentable over such a combination. Applicant respectfully submits that there is nothing in the teachings of these references which would suggest modifying the teachings of Sivaramakrsihnan, et al. to arrive at the presently claimed invention. There is no teaching by any of the references, taken either alone or in combination, of one gas supply pipe surrounding another gas supply pipe and the gas supply pipes being arranged to penetrate the ceiling of the reactive chamber through a common inlet so as to extend to a position above the suscepter, as in the presently claimed invention. The references do not teach this unique arrangement of features.

In view of these considerations it is respectfully submitted that the rejection of claims 1, 3 and 4 under 35 USC 103(a) over a combination of the above-discussed references is overcome and should be withdrawn.

Since claim 1 has been established above to distinguish over the prior art, it is not necessary to address the dependent claims, including claim 2, to which the Amano, et al. reference has been cited, because dependent claim 2 imposes further limitations on claim 1 and, as such, is even further distance from the prior art.

Reconsideration and allowance of the present application are respectfully requested.

In the event the actual fee is greater than the payment submitted or is inadvertently not enclosed or if any additional fee during the prosecution of this application is not paid, the Patent Office is authorized to charge the underpayment to Deposit Account No. 15-0700.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on May 8, 2003:

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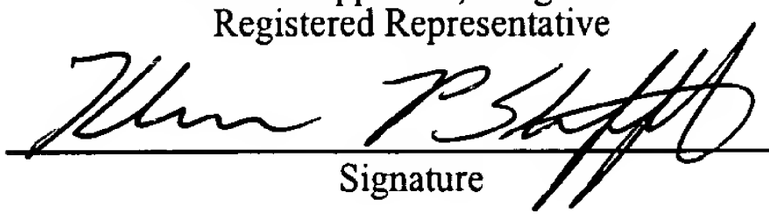
Name of applicant, assignee or Registered Representative



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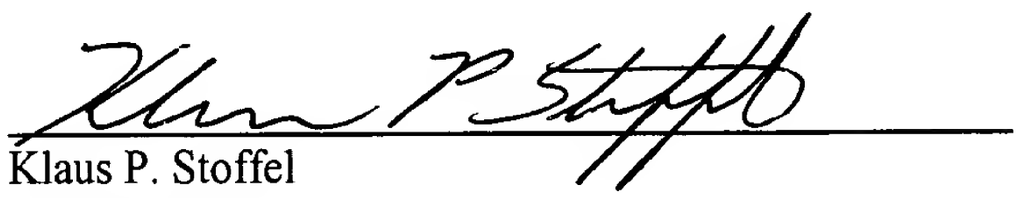
Respectfully submitted,



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